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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/540,396

09/21/2005

Ramon Guimil

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7590

07/24/2008

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WASHINGTON, DC 20005

EXAMINER

GROSS, CHRISTOPHER M

ART UNIT

PAPER NUMBER

1639

NOTIFICATION DATE

DELIVERY MODE

07/24/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-PAT-Email@rfem.com

Office Action Summary	Application No. 10/540,396	Applicant(s) GUIMIL ET AL.	
	Examiner CHRISTOPHER M. GROSS	Art Unit 1639	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 6-9 and 22-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 10-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Responsive to communications entered 4/10/2008. Claims 1-26 are pending. Claims 6-9,22-26 are withdrawn. Claims 1-5,10-21 are examined herein.

Election/Restrictions

Applicant's election without traverse of group 1, drawn to a process for synthesizing biopolymers by stepwise assembly using two-stage protecting groups of formula (I) (i.e. claims 4-5, 12-13 linked by claims 1-3,10-11,14-21) in the reply filed on 4/10/2008 is acknowledged.

Applicant's election without traverse of: nucleic acids for the species of "biopolymer"; the compound shown in figure 2 of the present specification when $R_1=R_2=H$ and X is a phosphoramidite for the species of "two-stage protecting group"; acid treatment for the species of "chemical step", such as set forth in present claim 2 in the reply filed on 4/10/2008 is acknowledged.

Claims 6-9,22-26 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected inventions, there being no allowable generic or linking claim. Election was made without traverse in the reply filed on 4/10/2008

Priority

The present application filed 9/21/2005 is a 371 of PCT/EP03/14822 filed 12/23/2003.

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d) to German patents 102 60 591.2 (filed 12/23/2002) and 102 60 592.0

(filed 12/23/2002). Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5,10-21 are rejected under 35 U.S.C. 102(a) as being anticipated by **Guimil et al** (WO 03/004510).

Claims 1-5,10-21 are rejected under 35 U.S.C. 102(e) as being anticipated by **Guimil et al** (US Patent Application 2004/0197851).

Please note the above PCT application (referred to as '510) was not filed in English and thus does not constitute prior art under 35 USC 102(e) in accordance with MPEP 706.02(f)(1). Being published 16 Jan 2003, said '510 application does constitute prior art under 35 USC 102(a), however.

The corresponding 371 application to '510 (US Patent Application 2004/0197851, referred to as '851) constitutes art under 35 USC 102(e) in having an effective filing date of 24 Aug 2001.

Furthermore, said '851 371 application has served as an English translation of '510 and the cross-references set forth below are with respect to '851.

The claimed subject matter per claim 1 is drawn to a process for synthesizing biopolymers by stepwise assembly from synthesis building blocks which carry protective groups, where at least one synthesis building block which carries a two-stage protective group is used, where the two-stage protective group is activated by an illumination step and eliminated by a subsequent chemical treatment step, characterized in that the activation takes place by elimination of a photoactivatable protective group which is selected from triplet-sensitized photoactivatable groups, labeled photoactivatable groups and triplet-sensitized and labeled photoactivatable groups.

Claims 2-5,10-21 represent variations thereof.

Guimil et al teach, throughout the document and especially figure 2 a process for synthesizing biopolymers by stepwise assembly from synthesis building blocks which carry protective groups, where at least one synthesis building block which carries a two-stage protective group is used, where the two-stage protective group is activated by an illumination step and eliminated by a subsequent chemical treatment step, characterized in that the activation takes place by elimination of a photoactivatable protective group which is a triplet-sensitized photoactivatable group, as set forth in claim 1.

Guimil et al teach treatment with an acid (elected species) in figure 1, reading on claims 2 and 3. Said protective group illustrated in figure 2 of Guimil et al is a derivatized trityl group, reading on claim 4.

Said protective group illustrated in figure 2 of Guimil et al reads on claim 5 when $R_1=R_2=H$ (elected species); X is a nucleoside (synthesis building block); m is 0; Y is the Nitrophenylpropyloxycarbonyl (NPPOC) photoactivatable protective group.

Guimil et al teach in paragraph 0013 (of 2004/0197851) the invention also encompasses compounds which carry one or more fluorescent groups, e.g. compounds in which said NPPOC incorporates a fluorescent photoprotective group and/or the trityl framework bear fluorescent groups, which is taken as the labeling groups of claims 10,11 and fluorescent label of claim 12 and 13.

Said nucleoside as well as claim 10 of Guimil et al read on the nucleic acids (elected species) of claims 14 and 15.

Guimil et al teach phosphoramidites in claim 12, reading on claim 16.

Said protective group illustrated in figure 2 of Guimil et al protects the 5'-O atom, as set forth in claim 17.

Guimil et al teach a spacer or linker in claim 14 reading on claim 18.

Guimil et al teach a solid-phase synthesis in claim 15 reading on claim 19.

Guimil et al teach site-dependent synthesis in claim 16, reading on the location-dependent synthesis set forth in claim 20.

Guimil et al teach quality control in paragraph 0019, reading on claim 21.

Claim Rejections - 35 USC § 112

The following is a quotation of the **second** paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 2, the phrase "e.g." renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-5,10-20 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-9,13,17-22 of U.S. Patent No. 7355036 (referred to as '036).

Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 1, drawn to a process for synthesizing biopolymers by stepwise assembly from synthesis building blocks which carry protective groups, where at least one synthesis building block which carries a two-stage protective group is used, where the two-stage protective group is activated by an illumination step and eliminated by a subsequent chemical treatment step, characterized in that the activation takes place by elimination of a photoactivatable protective group which is selected from triplet-sensitized photoactivatable groups (genus), of the instant invention, is anticipated by a process for the synthesis of a nucleic acid by stepwise assembly of building blocks, wherein the building blocks are building blocks for the synthesis of a nucleic acid, wherein at least one of the building blocks carries a two-stage protective group, wherein the two-stage protective group contains a photoactivatable group selected from the group consisting of nitroveratryloxycarbonyl (NVOC), alpha-methyl-6-nitropiperonyloxycarbonyl (MeNPOC), 3,5 -dimethoxybenzoincarbonate (DMBOC), 2-(o-nitrophenyl)propyloxycarbonyl (NPPOC), o-nitrobenzyl and 2-(o-nitrophenyl) ethyl, wherein the photoactivatable group is removed by an illumination step and the remainder of the two-stage protective group is removed by a subsequent acid treatment step (species) of '036.

For **claims 2-3**, the '036 patent claims acid treatment (e.g. see claims 1,13)

For **claims 4-5,13** the '036 patent claims a derivatized trityl group (e.g. see claims 2,13).

For **claims 10-12**, the '036 patent claims fluorescent groups (e.g. see claims 3,4,17,18).

For **claims 14-15**, the '036 patent claims nucleic acids (e.g. see claims 1,13).

For **claim 16**, the '036 patent claims phosphoramidites (e.g. see claims 5,21).

For **claim 17**, the '036 patent claims 5'-O protection (e.g. see claim 6,20,22).

For **claim 18**, the '036 patent claims linkers and spacers (e.g. see claim 7).

For **claim 19**, the '036 patent claims solid-phase synthesis (e.g. see claim 8).

For **claim 20**, the '036 patent claims site (location)-dependent synthesis (e.g. see claim 9).

Additionally, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify embodiments of '036 that fall outside the scope of the present application to select a specifically disclosed embodiment that falls within the scope of the present application because these embodiments describe methods with similar steps in that they all utilize a common core (e.g. formula I or analogs thereof). Furthermore, one of ordinary skill in the art would have been motivated to make such a modification because such modifications are disclosed as "preferred" since the dependent claims of the '036 patent "teach toward" Applicant's claimed methods.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Gross whose telephone number is (571)272-4446. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. Douglas Schultz can be reached on 571 272-0763. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1639

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Christopher M Gross
Examiner
Art Unit 1639

cg

/Mark L. Shibuya, Ph.D./
Primary Examiner, Art Unit 1639